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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/805,064	03/19/2004	Dan A. Hays	D/A3119	7910

25453 7590 09/02/2005

PATENT DOCUMENTATION CENTER
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ROCHESTER, NY 14644

EXAMINER	
JAGAN, MIRELLYS	
ART UNIT	**PAPER NUMBER**
2859	

DATE MAILED: 09/02/2005

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary	Application No.	Applicant(s)	
	10/805,064	HAYS, DAN A.	
	Examiner	Art Unit	
	Mirellys Jagan	2859	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

1)☐ Responsive to communication(s) filed on _____.

2a)☐ This action is **FINAL**. 2b)☒ This action is non-final.

3)☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4)☒ Claim(s) 1-20 is/are pending in the application.

4a) Of the above claim(s) _____ is/are withdrawn from consideration.

5)☐ Claim(s) _____ is/are allowed.

6)☒ Claim(s) 1-20 is/are rejected.

7)☐ Claim(s) _____ is/are objected to.

8)☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9)☐ The specification is objected to by the Examiner.

10)☒ The drawing(s) filed on 19 March 2004 is/are: a)☒ accepted or b)☐ objected to by the Examiner.

Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).

11)☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

12)☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

a)☐ All b)☐ Some * c)☐ None of:

1.☐ Certified copies of the priority documents have been received.

2.☐ Certified copies of the priority documents have been received in Application No. _____.

3.☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

1) ☒ Notice of References Cited (PTO-892)
2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3) ☒ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08) Paper No(s)/Mail Date 3/19/04.
4) ☐ Interview Summary (PTO-413) Paper No(s)/Mail Date. _____ .
5) ☐ Notice of Informal Patent Application (PTO-152)
6) ☐ Other: _____.

DETAILED ACTION

Information Disclosure Statement

1. The information disclosure statement filed 3/19/04 fails to comply with 37 CFR 1.98(a)(2), which requires a legible copy of each cited foreign patent document; each non-patent literature publication or that portion which caused it to be listed; and all other information or that portion which caused it to be listed. Therefore, the information referred to the in article by Rimai et al has not been considered since a copy of this publication has not been received.

Claim Objections

2. Claims 3-8, 10, 12-18, and 20 are objected to because of the following informalities:

In claims 3 and 13, respectively, it is not clear if the claimed first and second charging devices are referring to the 'ion charging zone' of claims 1 and 11, or if they are used in addition to the 'ion charging zone' of claims 1 and 11. Furthermore, in claims 3 and 13 it is not clear which of the charging devices, e.g., the 'first charging device' or the 'second charging device', is the device that charges the particles to the Pauthenier charging limit of claims 2 and 12.

The preamble of independent claim 11 is drawn to an electrostatic printer, the electrostatic printer using the claimed method to charge toner particles. Accordingly, the preambles of dependent claims 12-20 should also be drawn to the electrostatic printer, and not the method used by the electrostatic printer, of independent claim 11.

Claims 4-8 and 10 are objected to for being dependent on an objected base claim. Appropriate correction is required.

Claim Rejections - 35 USC § 103

3. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

> (a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negatived by the manner in which the invention was made.

4. This application currently names joint inventors. In considering patentability of the claims under 35 U.S.C. 103(a), the examiner presumes that the subject matter of the various claims was commonly owned at the time any inventions covered therein were made absent any evidence to the contrary. Applicant is advised of the obligation under 37 CFR 1.56 to point out the inventor and invention dates of each claim that was not commonly owned at the time a later invention was made in order for the examiner to consider the applicability of 35 U.S.C. 103(c) and potential 35 U.S.C. 102(e), (f) or (g) prior art under 35 U.S.C. 103(a).

5. Claims 1-20 are rejected under 35 U.S.C. 103(a) as being unpatentable over Japanese Patent 357190970 to Watanabe in view of the publication titled "Unipolar particle charging in an alternating electric field" by Adamiak et al [hereinafter Adamiak].

Watanabe discloses an electrostatic printer employing a method for charging toner particles prior to being delivered to a development delivery device (2), the method comprising:

entraining the particles in an airborne stream and transporting the stream of particles to an ion-charging zone located between a first and a second charging device (electrodes 10);

subjecting the stream to unipolar gas ions at the ion charging zone and uniformly charging irregular or spherical shaped particles in the stream (uniformly charges any-shaped toner particles in the stream) to a charging limit with the first and second charging devices (10); and

collecting the charged particles in a collection area (chamber 6) to be subsequently delivered to the development delivery device (2) (see Abstract and figure 1).

Watanabe does not disclose the first and second charging device applying an alternating electric field in the zone, the first and second charging device comprising a first charging device having a first AC voltage bias applied thereto for charging the particles, and a second charging device having a second AC voltage bias that is 180 degrees out of phase from the first AC voltage applied thereto for re-charging the particles; the power source to supply the first and second AC voltages being provided by a power supply source connected to a sine or square-wave generator; uniformly charging the particles to a Pauthenier charging limit; and the first and second charging devices including a scorotron.

Adamiak discloses a system for charging small particles. The system entrains the particles in an airborne stream (see figure 1) and subjects the stream to unipolar gas ions at an ion charging zone located between a first and a second charging device that apply an alternating electric field in the zone. The first and second charging devices comprise a first charging device having a first AC voltage bias applied thereto for charging the particles, and a second charging device having a second AC voltage bias that is 180 degrees out of phase (anti-phase) from the first AC voltage applied thereto for re-charging the particles, wherein the power source to supply the first and second AC voltages is provided by a power supply source connected to a sine wave

generator. The first and second charging devices uniformly charge irregular or spherical shaped particles in the stream to a Pauthenier charging limit, and comprise a scorotron (i.e., a corona electrode and its corresponding grid forms a 'scorotron') (see figure 2). Adamiak teaches that his charger for charging small particles is an improvement over prior art chargers since it avoids precipitation of the particles in the charger, i.e., prevents the particles from being attracted to the electrodes (see sections 1 and 2 on pages 275-276).

Referring to claims 1 and 11, it would have been obvious to one having ordinary skill in the art at the time the invention was made to modify the method disclosed by Watanabe by replacing the charging devices with charging devices as disclosed by Adamiak, in order to avoid precipitation of the particles in the charger.

Conclusion

6. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure.

The following patents and publication disclose a toner charging system:

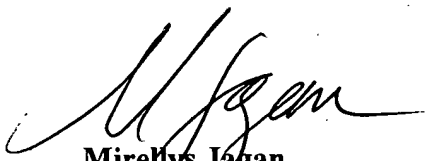
U.S. Patent 4,450,220 to Haneda et al
U.S. Patent 4,669,861 to Nukushima et al
U.S. Patent 3,707,390 to Sullivan
U.S. Patent 6,272,305 to Liu
U.S. Patent 6,175,707 to Eklund et al
U.S. Patent 6,025,594 to Bryce et al
U.S. Patent 3,418,972 to Obuchi
U.S. Patent 4,688,927 to Oda et al
U.S. Patent Application Publication 2004/0253022 to Arai et al
Japanese Patent 61189565 to Yamamoto et al

7. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Mirellys Jagan whose telephone number is 571-272-2247. The examiner can normally be reached on Monday-Friday from 11AM to 5PM.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Diego Gutierrez can be reached on 571-272-2245. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see http://pair-direct.uspto.gov. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

MJ
August 31, 2005



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